

**ABSTRACT**

A semiconductor device includes insulation films (6 and 8) formed over a silicon substrate (1), a buried wire (14) formed in the insulation films (6 and 8), and a barrier metal film (A1) formed between each of the insulation films (6 and 8) and the buried wire (14). The barrier metal film (A1) is formed of a metal oxide film (11), a transition layer (12a) and a metal film (13) stacked in this order in the direction from a side of the barrier metal film (A1) at which the insulation films (6 and 8) exists to a side thereof at which the buried wire (14) exists. The transition layer (12a) is formed of a single atomic layer having substantially an intermediate composition between respective compositions of the metal oxide film (11) and the metal film (13).